

Claim Amendments

Claims 1 - 8 (cancelled).

1 9. (currently amended) An apparatus for liberating
2 oxygen isotopes from oxygen-containing solids ~~characterized in that~~
3 ~~it includes~~ comprising a graphite ~~euvette~~ (1) crucible and an
4 induction heating source capable of heating an oxygen-containing
5 solid in said crucible to a temperature at which oxygen in said
6 solids react with carbon of said crucible to form CO or CO₂.

1 10. (currently amended) The apparatus according to claim
2 9, ~~characterized in that~~ wherein the graphite ~~euvette~~ (1) crucible
3 is provided in a vacuum-tight housing (5) of quartz glass to which
4 a pump is connected.

1 11. (currently amended) The apparatus according to claim
2 9, ~~characterized in that it~~ which comprises means (7) for capturing
3 gaseous CO or ~~CO₂~~ CO₂ arising from the induction heating of the
4 solids in said crucible.

1 12. (currently amended) The apparatus according to
2 claim 10, ~~characterized in that~~ wherein the housing (5) of quartz
3 glass is provided with means (8) ~~for cooling it~~ the housing.

1 13. (currently amended) The apparatus according to
2 claim 10, ~~characterized in that~~ wherein the housing ~~(5)~~ of quartz
3 glass can be opened on opposite sides to replace the solid ~~with-~~
4 and the graphite cuvette crucible containing the solid.

5 14. (currently amended) The apparatus according to
6 claims 13, ~~characterized in that~~ wherein the graphite ~~cuvette (1)~~
7 crucible is elongated whereby at ~~an upper~~ a lower end a cavity
8 ~~(2)~~ is provided which can receive a rod with which the graphite
9 cuvette can be mounted in, the housing ~~(5)~~.

Claims 15 to 17, (cancelled).

1 18. (currently amended) An apparatus for liberating
2 oxygen isotopes from a solid, comprising:

3 an elongated quartz-glass evacuable vacuum-tight
4 housing connectable to a vacuum pump and having an outlet;

5 an elongated graphite ~~cuvette~~ crucible having a cavity at
6 one end and a bore at an opposite end, said cavity receiving a
7 sample of said solid;

8 a rod received in said bore for inserting said ~~cuvette~~
9 crucible into said housing and positioning said cuvette in said
10 housing;

11 a cooling jacket surrounding said housing and provided
12 with an inlet and an outlet for passing a cooling liquid through
13 said jacket;

14 an induction coil surrounding said housing for induction
15 heating of said ~~euvette~~ crucible and said solid to gradually raise
16 a temperature of said solid ~~ti~~ to initially drive impurities
17 therefrom and then decompose said solid to liberate oxygen there-
18 from whereby said oxygen combines with graphite carbon to form a
19 ~~carbon-oxygen~~ gas comprising carbon oxides;

20 a duct for admitting a carrier gas to said housing
21 whereby said gas containing oxygen liberated from said solid is
22 entrained in said carrier gas through said outlet to a spectrometer
23 for isotope analysis.